LISTING OF CLAIMS:

Claims 1. - 66. (Canceled)

67. (Previously Presented) A positive-acting photoresist composition comprising a base resin polymerized from any of the following monomers:

wherein R₁ is selected from the group consisting of –H and –CH₃;

R₂ is selected from the group consisting of –H, an alkyl group having from 1 to 4 carbon atoms, and an alkoxy group having from 1 to 4 carbon atoms;

 R_3 is –H, or a hydrophilic-enhancing moiety selected from the group consisting of a hydroxyl group –OH, a keto group =O, carboxylic acid group –COOH, and alkoxy group –OR₄, and a group –OC(O)OR₄;

 R_4 is $-CH_3$ or $-C_2H_5$.

- 68. (Original) The photoresist composition of claim 67, further including a monomer having adamantane as a pendant group.
- 69. (Original) The photoresist composition of claim 67, further including a monomer having a diamondoid pendant group.
- 70. 72 (Canceled)
- 73. (Currently Amended) The photoresist composition of any of claims 43, 47, 54, 62, 67, or 71 claim 67, wherein the average Ohnishi number of any of the diamondoid containing monomers is greater than about 3.
- 74. (Currently Amended) The photoresist composition of any of claims 43, 47, 54, 62, 67, or 71 claim 67, wherein the average value of the solubility parameter of the base resin, in units of cal^{0.5}/cm^{1.5}, ranges from about 8 to 13.
- 75. (Currently Amended) The photoresist composition of any of claims 43, 47, 54, 62, 67, or 71 claim 67, further including a photoacid generator selected from the group consisting of an onium salt, a diazonium salt, an ammonium salt, a phosphonium salt, an iodonium salt, a sulfonium salt, a selenonium salt, an arsonium salt, an organic halogeno compound, and an organo-metal/organic halide compound.
- 76. (Previously Presented) The photoresist composition of claim 75, wherein the photoacid generator has an o-nitrobenzyl type protecting group.
- 77. (Original) The photoresist composition of claim 75, wherein the photoacid generator generates a sulfonic acid upon photolysis.
- 78. (Original) The photoresist composition of claim 75, wherein the amount of the photoacid generator in the composition ranges from about 0.01 to 30 weight percent.

- 79. (Currently Amended) The photoresist composition of any of claims 43, 47, 54, 62, 67, or 71 claim 67, wherein the composition further comprises an additive selected from the group consisting of a surface active agent, an organic basic compound, an acid decomposable dissolution inhibiting compound, a dye, a plasticizer, a photosensitizer, a compound promoting solubility in a developing solution, and additives comprising hydrophilic diamondoid derivatives.
- 80. (Currently Amended) The photoresist composition of any of claims 43, 47, 54, 62, 67, or 71 claim 67, wherein the composition further includes a solvent selected from the group consisting of ethylene dichloride, cyclohexanone, cyclopentanone, 2-heptanone, γ-butyrolactone, methyl ethyl ketone, ethylene glycol monomethyl ether, ethylene glycol monoethyl ether, 2-methoxyethyl acetate, ethylene glycol monomethyl ether acetate, propylene glycol monomethyl ether (PGME), propylene glycol monomethyl ether acetate (PGMEA), ethylene carbonate, toluene, ethyl acetate, butyl acetate, methyl lactate, ethyl lactate, methyl methoxypropionate, ethyl ethoxypropionate, methyl methoxypropionate, ethyl pyruvate, propyl pyruvate, N,N-dimethylformamide, dimethylsulfoxide, N-methylpyrrolidone, and tetrahydrofuran.

Claims 81. – 96. (Canceled)